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32. PELLAEA ANDROMEDAEFOLIA, var. PUBESCENS.—More specimens of the fern called by this name in the BULLETIN of January, 1881, have been received, including some from Saltillo, Mexico, collected by Dr. Edward Palmer. Mr. Davenport informs me that Mr. Baker refers this fern to *Pellaea cordata*, which it resembles about as much as it does *P. andromedaefolia*. For the present 1 must regard its position as doubtful. Dr. Palmer collected many interesting ferns last year, in Northern Mexico and in Western Texas. Among them are the long-lost *Pellaea aspera*, and the very scarce *Aneimia Mexicana*. He found *Notholaena Grayi* with both white and yellowish powder, and *N. sinuata* in a great variety of forms. I hope to have a full account of his ferns ready before very long.

33. ASPLENIUM PINNATIFIDUM, Nutt.—Writing of this little fern at page 63 of Ferns of N. America, Vol. I., I said : "I find one or two instances of a slight enlargement of the apex, as if there were an attempt to form a proliferous bud." I have now received a plant in which one of the fronds has produced a terminal bud, which has developed five little fronds. The plant came with the following letter from a venerable botanist to whom all fern lovers have long been under obligations.

Moulton, Ala., June 28, 1881.

My dear Sir :

I picked up on the 21st of June, the fern which you will find enclosed, *Asplenium pinnatifidum*, Nutt., which exhibits as clear an instance of growing from the tip of the frond as *Asplenium rhizophyllum* (or *Camptosorus rhizophyllus*). I have seen one specimen of like character before ; and Mr. John F. Beaumont, now dead, advised me that he had found a like plant in South Alabama.

Very truly your friend,
Thomas M. Peters.

34. BOTRYCHIUM MATRICARIAEFOLIUM, Al. Braun.—Mr. and Mrs. Morgan found good specimens of this rare fern near Columbus, Ohio, June 10th, 1881. Professor Joseph Milliken was also associated with them in the discovery. This is the first record of this plant growing west of the Alleghanies and south of Lake Superior.

New Haven, August 12, 1881.

§ 94. **Vernation in Botrychia.**—I have had placed in my hands for examinatlon two Botrychiums whose buds have thrown a doubt, for the first time in my experience, on the reliability of the bud-form as a test for the determination of the smaller species of the genus.

One of these specimens is a large, finely-developed, unquestionable specimen of *B. simplex* of the compositum form, and nearly ternate ; the other is a specimen of *B. matricariaefolium* of good size, and with the sterile division cleft nearly into two portions.

The specimens were collected in the Lower Merrimac Valley, Essex Co., Mass., by Mr. W. P. Conant, who is thus entitled to the credit of adding another station to those already recorded for that once rare fern—and still rare in Massachusetts—*B. simplex*, Hitch.

The peculiarity about the buds of these two specimens is that in the specimen of *B. simplex*, contrary to all the examples heretofore examined, without any exception, the apex of the sterile division *is bent over the apex of the fertile division, in a manner approaching the bud of B. Lunaria* ; and in that of *B. matricariaefolium* the apex is only slightly bent downward, scarcely more than occurs in the bud of *B. boreale* ; the apex, however, is more acute than in *B. boreale*, and otherwise the bud has the characters of *B. matricariaefolium.*

Just what bearing these specimens may have upon my Vernation Notes (TORREY BULLETIN, Jan., 1878) and how far they may go toward invalidating the position therein taken, I am not prepared to say.

If we consider that the number of specimens which one may be able to examine, however great, may still bear a very small proportion to the total number of specimens in existence, it will be seen that if a deviation from an assumed type occurs even once in specimens examined it may occur many times in Nature.

As, however, this is purely conjectural, and we cannot know the actual number of specimens in existence, nor what proportion such deviations may bear to them, and as we can only base our rule of judgment upon such data as have actually come under our observation, and as it is not possible to establish any absolute rule—one that will not admit of some exception—an occasional deviation, such as this, does not seem to destroy the value of a character that is shown to prevail as a rule, and to be constant in the great majority of instances.

But I leave the discussion of inferences until such time as they can be more intelligently considered, and content myself with simply placing on record the above facts.

Medford, Mass. GEO. E. DAVENPORT.

§ 95. **Onoclea sensibilis,** L., var., **obtusilobata,** Torr.—Spending a portion of my summer vacation in Litchfield Co., Connecticut, I have made some observations among the ferns of this section which are found in abundance and profusion rarely equalled.

Camptosorus grows to some extent on the granitic rocks of this vicinity. I have never found it before except on highly calcareous rocks.

Ophioglossum vulgatum, L., is found in bogs, the sterile segment fully 3½ inches long.

"*Frondosa* forms" of *Osmunda cinnamomea*, L., occur, some with the fronds half sterile, half fertile, while *Osmunda regalis*, L., occasionally has the frond fertile in the middle !

The most interesting forms, however, were the variations of *Onoclea sensibilis*, L., which would have furnished ample constructive material for some of our more ardent variety manufacturers. In a low, rocky meadow near West Goshen the following graded series was found :

A. *Normal fertile fronds* with secondary rachises erect and appressed to the primary.

B. *Fertile fronds.* Segments all normally bead-like ; secondary rachises spreading, regularly inclined to the primary about 35°.